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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,527	11/21/2001	Walter R. Smith	MFCP.88141	3082

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EXAMINER

CHOW, CHIH CHING

ART UNIT	PAPER NUMBER
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2122

DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/990,527

Applicant(s)

SMITH, WALTER R.

Examiner

Chih-Ching Chow

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the application filed on November 01, 2001.
2. The priority date considered for this application is May 24, 2001, which is the filing date of the provisional application no. 60/293,506.
3. Claims 1-12 have been examined.

Drawings

4. The drawings are objected to because the description of the drawings is hard to follow. For example, in paragraph 0040, the description about FIG. 5 only covers 230, 244, 245, and 246, however FIG. 5 also includes 260, 264, 266 and 268, but the description for those items are not addressed till paragraph 0043, wherein the description of FIG. 6 is in paragraph 0042, and there is no figure number recited in paragraph 0043. Applicant should make appropriate update to the specification so the descriptions of the figure items are easy to follow. The objection to the drawings will not be held in abeyance.
5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 262 (referred but not found in drawing). The objection to the drawings will not be held in abeyance.

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6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 276 (in drawing but not in specification). The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 7 is rejected since the 'the identifier identifying information unwanted by a software provider' is not clearly defined. The 'unwanted by a software provider' is not explained in the specification. Examiner herein assumes this sentence means 'the identifier identifying information (error text strings) are not required (and not delivered to the customer) when executing the application program'.

9. Claim 8 is rejected since the 'selected data indicated by the identifier as unwanted information' is not clearly defined. This sentence is not explained anywhere in the specification. Examiner herein assumes this sentence means 'the information about the selected event which is identified by the identifier (tag value), are not required (and not delivered to the customer) when executing the application program'.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1, 3, 7-10 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,311,327 to Stephen Caine O'Brien et al. (hereinafter "O'Brien").

CLAIM

1. A method for obtaining information regarding events to be taking place within a software program to be used by a customer on a computing device, comprising: including, for each of a number of selected events, an indicator within the software program that records the selected event, the indicator including a text string descriptive of the selected event;

(a) assigning a unique tag corresponding to each text string;

(b) creating an index mapping each tag to the corresponding text string; and

O'Brien

In O'Brien, column 4, lines 9-12, "Data tags are always associated with a specific control tag, and they have a data field that provides information about an **event** identified by the **control tag** with which it is associated." (the *selected event identified by an indicator*).

For items a and b, see O'Brien, column 10, lines 49-60, "The parser 311 and the tag instrumenter 69 may be added as a new routine to the modified compiler 66 to insert tag statements at appropriate points.... The language-independent analyzer 321 may also be constructed as

(c) removing each text string from the program prior to transferring the program to a customer.

an information entry application program interface ("API"), according to an embodiment of the invention. An API is a library of **called procedures** used by an **application program** (*in a software program*). Further, in O'Brien, column 11, lines 6-11, "the API 323 may provide a set of commands for retrieving information from the database 65 using a **tag value as a search key** (*mapping index*). Depending on the significance of the tag value, the API 323 may return a symbol name corresponding to the tag, a **text string**" (*a unique tag corresponding to each text string*). O'Brien teaches the concept of using a **unique tag as an index key to a corresponding text string** in a software program; the tag value can be inserted in **selected event** (*appropriate point, called procedure*). For item c, see O'Brien, column 12, lines 3-5, "The C preprocessor 66a **removes information from the source code** 60 (*removing each test string prior to transferring the program to a customer*) such as comments that may have been added by the source code's programmer."; -- the information can include the text string from the program; and further, in column 22, lines 15-19, "A probe, such as the probe tip 12, represents but one mechanism for detecting tags during a program's execution. Other detection mechanisms include **writing tag values to a file** which for subsequent analysis and

capturing **tag values** passing during an **external function call.**" (see Fig. 1), this sentence implies that in O'Brien's art, the text string does not reside in the application program, the application program only contains the **tag values**. Therefore, there is no need to remove text string before transferring the program to a customer.

3. The method of claim 1, wherein the indicator is a function call.

For the feature of claim 1 see claim 1 rejection. O'Brien teaches "capturing **tag values** passing during an **external function call.**" (column 22, line 19). Therefore, the **indicator (tag value)** can be a **function call**.

7. The method of claim 1, further comprising including within selected indicators an identifier, the identifier identifying information unwanted by a software provider.

For the feature of claim 1 see claim 1 rejection. O'Brien's has disclosed the 'probe tip' (number 12 in Fig. 1) which is a **separate unit** from the computer, further, in column 7, lines 27-30, "After the probe chassis 20 has performed various **tabulation and data reduction functions (filtering out)** on the data from the probe tip 12, it outputs appropriate data to the host system 40 through the local area network cable 30". The probe contains an **identifier**, which will be used to **identify certain text string (identifying information)**, the text string is not used in the application program; this also means the identifier identifying information (matching text strings) are not required (*unwanted by a software provider*) for

program execution, see 35 USC 112
rejection item 8 above.

8. The method of claim 7, further comprising:

filtering out, prior to transmittal of the file to the repository, selected data indicated by the identifier as unwanted information.

For the feature of claim 7 see claim 7 rejection. Claim 7 rejection covers the 'filtering out' feature. In O'Brien, column 1, lines 48-51, "As another example, each tag statement may send **tag identifying data to a disk file** (*unwanted information; not delivered in software product*). As still another example, an array can be reserved in memory, with each array element corresponding to a tag inserted in a respective location in the source code." (*repository*).

9. A computer-readable medium having computer-executable instructions for performing a method for obtaining information regarding events to be taking place within a software program to be used by a customer on a computing device, comprising:

searching for a text string within the software program descriptive of a selected event;

assigning a unique tag to each text string found;

creating an index mapping each tag to the corresponding text string; and

removing each text string from the program.

Same as claim 1 rejection.

10. A computer system having a processor, a memory, and an operating

Same as claim 1 rejection.

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environment, the computer system operable to execute a method for obtaining information regarding events to be taking place within a software program to be used by a customer on a computing device, comprising:

- searching for a text string within the software program descriptive of a selected event;

- assigning a unique tag to each text string found;

- creating an index mapping each tag to the corresponding text string; and

- removing each text string from the program.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 2, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,311,327 by Stephen Caine O'Brien et al.

(hereinafter "O'Brien"), in view of US Patent No. 5, 608, 720 by Charles H. Biegel et al. (hereinafter "Biegel").

CLAIM

2. The method of claim 1, further comprising:

(a) creating, on the computing device, a file of the recorded events including the unique tag for each event;

(b) receiving, from the computing device, the file of the recorded events;

(c) processing the file, by replacing into the file, the text string corresponding to each tag within the file; and

(d) outputting a text string record of the events which took place within the software program, thereby providing a software provider a text record of the events taking place in the program to determine how the program may have failed.

O'Brien / Biegel

For the feature of claim 1 see claim 1 rejection. For items a, b, and c see claim 1 rejection. For item d, O'Brien teaches providing text record when an error has occurred, in column 17, lines 22-26, "When an error is identified, a set of data and a control tag are written to indicate the error. The information present in the tags include an error identifier, the address of the block in error and its size (if any), the caller identifier(s) of the block's allocator and deallocator (if any), and the kind of allocator call begin attempted when the error was discovered."; but O'Brien does not mention the 'program may have failed' specifically. However, Biegel teaches this feature in an analogous art. In Biegel, column 28, lines 20-24, "An error identifier for an error is a code that is used to **decode the error** by offline tools in an output driver in the RDT (*coding and decoding*). This code is used to associate the error with a printable ASCII string.", column 48, lines 37-38, "If a **service operation fails**, the failure is translated into the most appropriate **TL1 error code**."

It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to supplement O'Brien's disclosure of the tagging of the application program by the tagging the program failures further taught by

Biegel, for the purpose of aid in system debugging (see Biegel, column 29, lines 34-35).

11. A method for recording program information, by a software provider, about events to be taking place within a software program executing on a computer to be used by a customer, comprising:

(a) including, for each of a number of selected events, an indicator within the software program that records the selected event, the indicator including a text string descriptive of the selected event;

(b) coding the text string with a unique tag corresponding to each text string;

(c) creating a decoding file mapping each unique tag to the corresponding text string; and

(d) removing each text string from the program prior to transferring the program to a customer.

O'Brien teaches all aspects of claim 11 but does not mention the 'coding and decoding' (items b and c) specifically. However, Biegel teaches this feature, see claim 2 rejection-(*coding and decoding*).

12. The method of claim 11, further comprising receiving, from the customer, a file of the recorded events, the file including the unique tag for each event;

decoding the file by mapping the coded tag with the corresponding text string; and

outputting a text string record of the events which took place within the software program,

For the feature of claim 11 see claim 11 rejection. For the rest of the feature of claim 12, see claim 2 rejection.

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thereby providing the software provider with a text record of the events taking place in the program to determine how the program may have failed.

14. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over

U.S. Patent No. 6,311,327 by Stephen Caine O'Brien et al. (hereinafter "O'Brien"),

in view of US Patent No. 5, 608, 720 by Charles H. Biegel et al. (hereinafter

"Biegel"), further in view of U.S. Patent no. 5,245,615 by Albert R. Treu

(hereinafter "Treu").

CLAIM

4. The method of claim 2, further comprising:
as the program executes on the computing device, limiting the size of the file of the recorded events.

O'Brien / Biegel / Treu

For the feature of claim 2 see claim 2 rejection. O'Brien and Biegel teach all aspects of claim 4 but does not mention the 'limiting the size of the file of the recorded events' specifically. However, Treu teaches this feature in an analogous art. In Treu, column 4, lines 66-67, "In a preferred embodiment, error log 88 has a size of 109 contiguous bytes."

It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to supplement O'Brien and Biegel's disclosure of the tagging of the application program and tagging the program failures by limiting the size of the error log taught by Treu,

for the purpose of storing predetermined error log information at predetermined locations therein. (see Treu's Abstract, lines 2-3).

5. The method of claim 4, further comprising:
in response to a failure of the program on the computing device, automatically transmitting the file to a repository accessible by the software provider.

For the feature of claim 4 see claim 4 rejection. For the 'transmitting the file to a repository' part, see claim 8 rejection.

6. The method of claim 5, wherein the failure is a crash of the program.

For the feature of claim 5 see claim 5 rejection. O'Brien and Treu teach the aspects of claim 6, except they don't mention 'crash' specifically. However, Biegel teaches the concept of crash as a failure of a program. In Biegel, column 27, lines 26-28, "4. Crash Log--captures a snapshot of the processor state when an irrecoverable error occurs on the processor".

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to supplement O'Brien and Treu's disclosure of the tagging of the application program and tagging the program failures by tagging a crash condition taught by Biegel, for the purpose of capturing the state of the processor while a crash occurred (see Biegel, column 29, line 47).

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Conclusion

The following summarizes the status of the claims:

35 U.S.C. 112 (2nd) rejection: 7, 8

35 U.S.C. 102 (b) rejection: 1,3, 7-10

35 U.S.C. 103 rejection: 2, 4-6, 11, 12

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Ching Chow whose telephone number is 703-305-7205. The examiner can normally be reached on 7:00am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on 703-305-4552. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chih-Ching Chow
Examiner
Art Unit 2122



JOHN CHAVIS
PATENT EXAMINER
ART UNIT 2124

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